09960717.092401

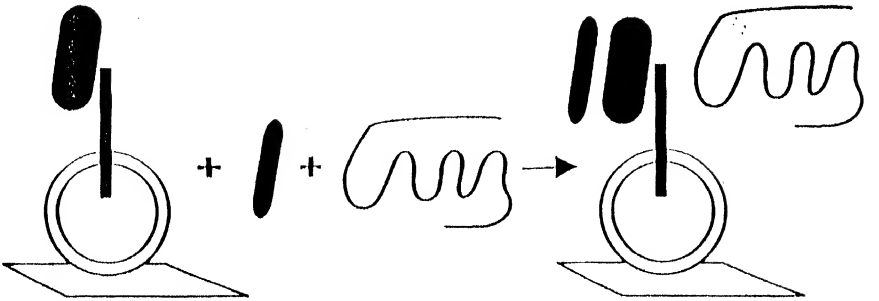
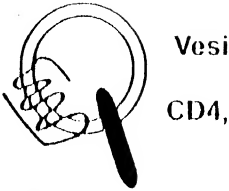
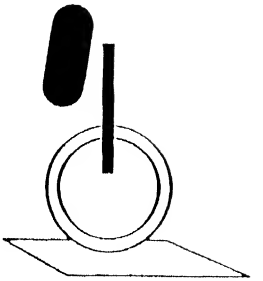


FIGURE 1

09960742 "092402



Vesicle or Liposome
+
CD4, CCR5 or CXCR4



Vesicle or Liposome or Inactivated Hiv-1 Virion
+
Primary Isolate
gp160

FIGURE 2

09960737 "092402

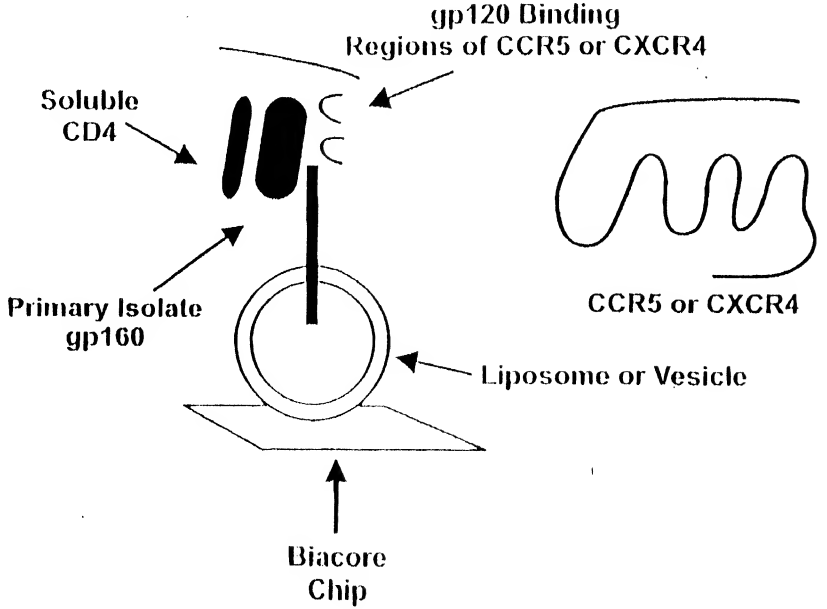


FIGURE 3

T04260 '27209660

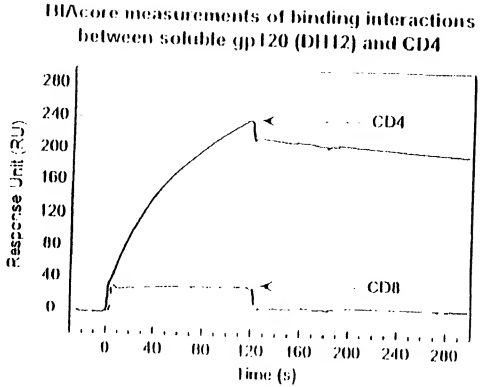


FIGURE 4

TO4260 ZT209660

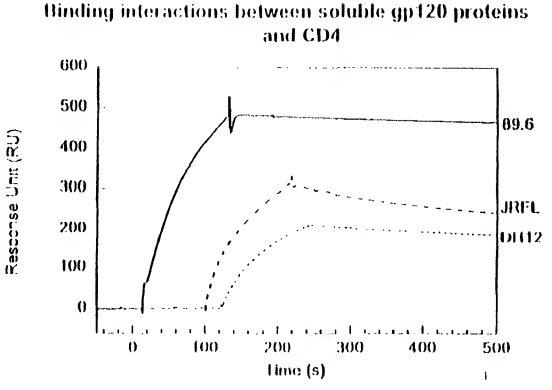


FIGURE 5

Kinetics and binding affinities of the interactions between gp120 and CD4

gp120	k_a, $M^{-1}s^{-1}$ (on-rate)	k_d, s^{-1} (off-rate)	K_d M	$t_{1/2}$ min
JRFL	$6.0x10^{3}$	$8.84x10^{-4}$	$1.5x10^{-7}$	14
DH12	$4.9x10^{3}$	$3.86x10^{-4}$	$7.8x10^{-8}$	30
89.6	$4.6x10^{3}$	$8.48x10^{-5}$	$1.8x10^{-8}$	136

FIGURE 6

WO 00/70360 PCT/US00/09660

Figure 7

TOH260"ZTZ09660

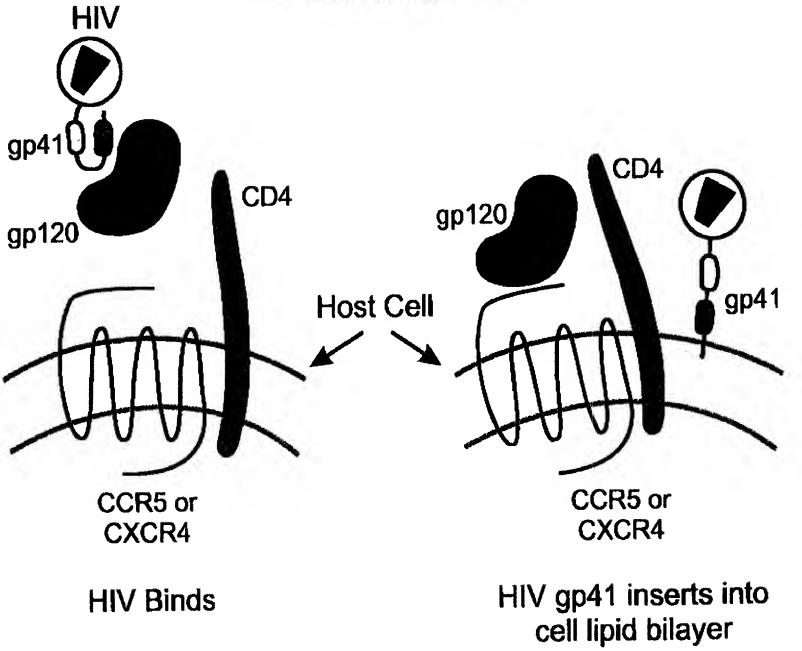


Figure 8

T04260"27209650

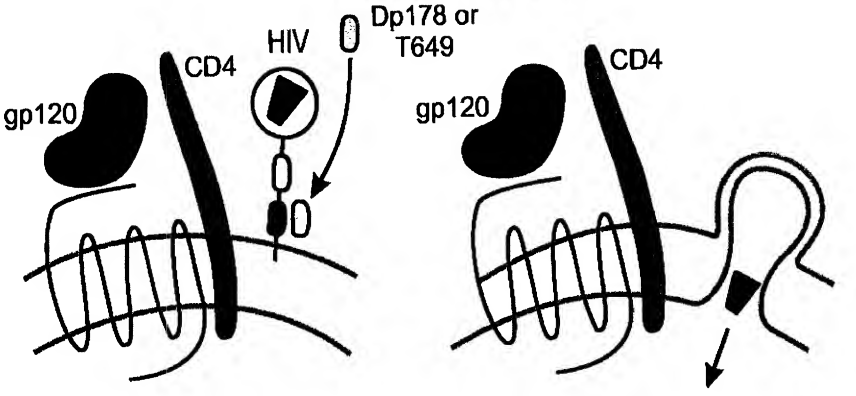


Figure 9

Figure 10

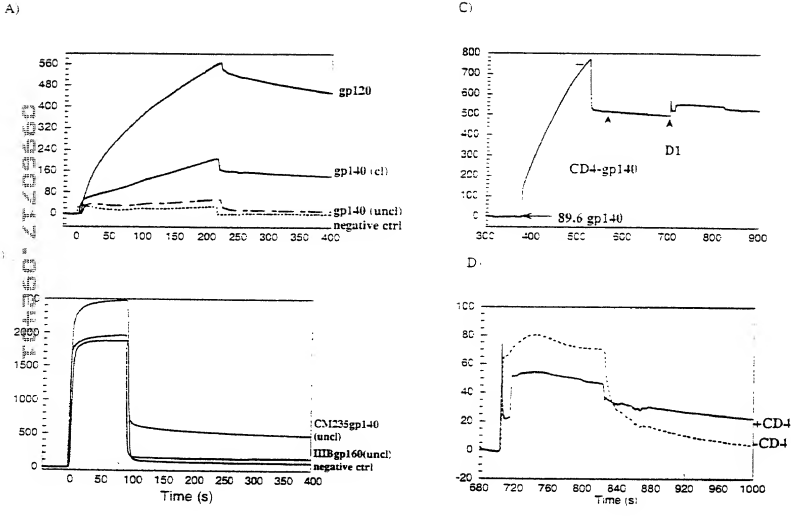
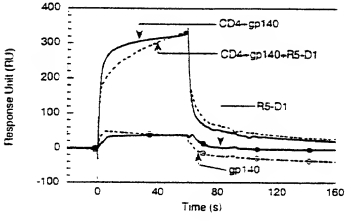
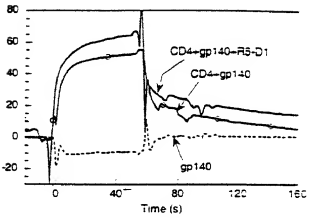

A)
gp120
gp140 (cl)
gp140 (uncl)
negative ctrl
B)
CM235gp140 (uncl)
IIIBgp160(uncl)
negative ctrl
Time (s)
C)
CD4-gp140
D1
89.6 gp140
D)
+CD4
-CD4
Time (s)

FIGURE 11

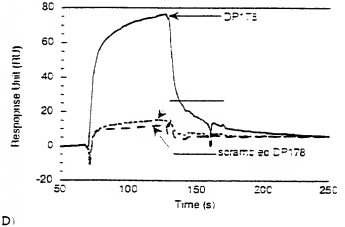
A)



B)



C)



D)

89.6 gp140	k_a $M^{-1}s$	k_d s^{-1}	K_d µM	$t_{1/2}$ s	R= RU
DP178					
CD4+gp140	$7.9x10^3$	$5.6x10^{-2}$	0.7	124	320
CD4+gp140+R5-D1	$3.47x10^2$	$3.86x10^{-2}$	1.1	180	328
gp140+R5-D1	nm	nm	nm	nm	38
gp140	nm	nm	nm	nm	35
T649OL					
CD4+gp140	$6.2x10^3$	$1.46x10^{-2}$	2.4	48	53
CD4+gp140+R5-D1	$5.1x10^2$	$5.3x10^{-2}$	1.0	131	64
gp140+R5-D1	nm	nm	nm	nm	0
gp140	nm	nm	nm	nm	0

TOH260 27209660

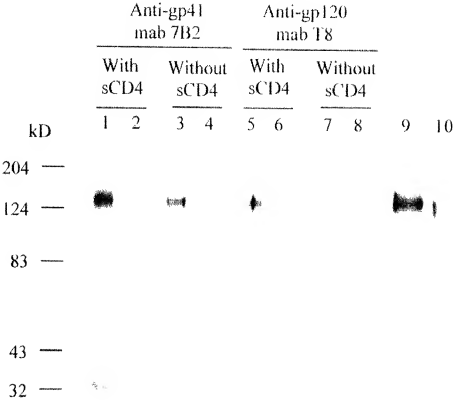
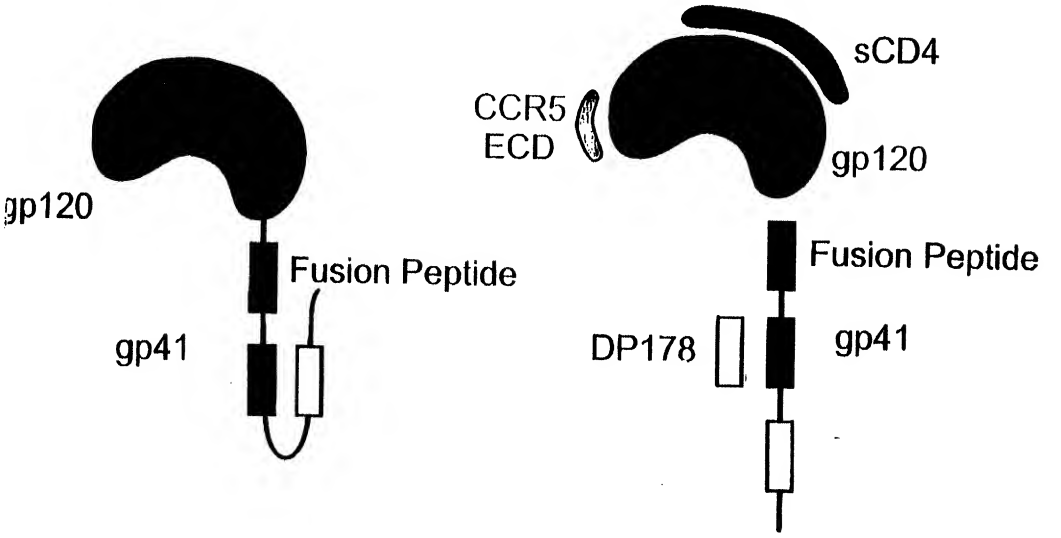


Figure 12

Figura 2B209660

Induced Binding of HR-2 Peptides to Soluble HIV 89.6 gp140 Envelope



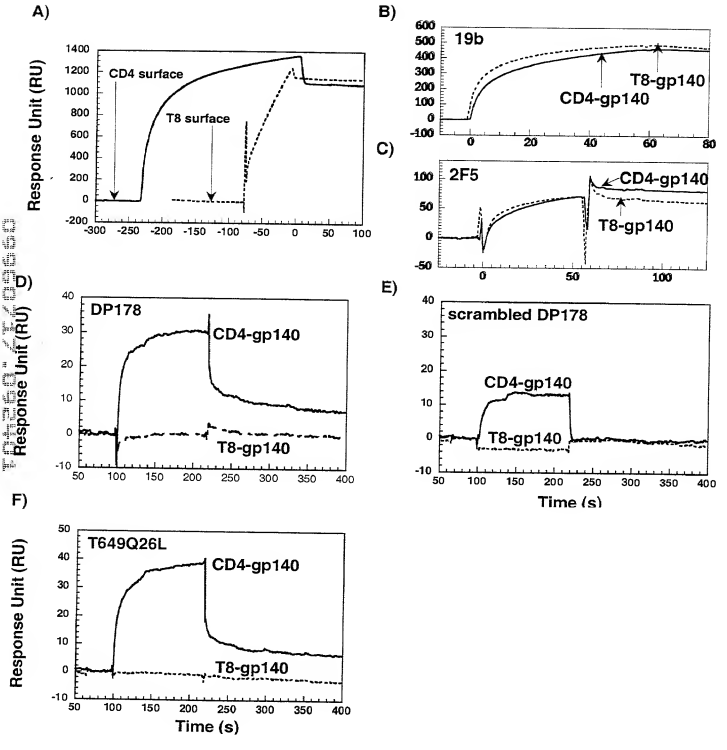
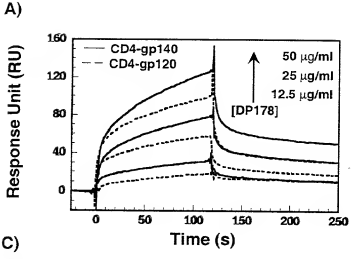
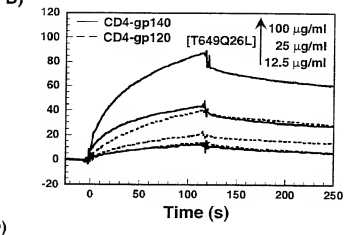
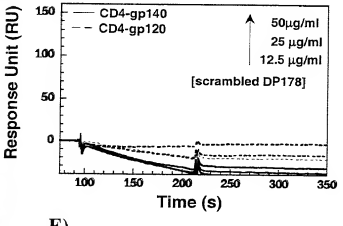
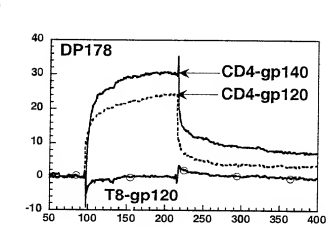

A)
Response Unit (RU)
CD4 surface
T8 surface
B)
19b
T8-gp140
CD4-gp140
C)
2F5
CD4-gp140
T8-gp140
D)
DP178
CD4-gp140
T8-gp140
E)
scrambled DP178
CD4-gp140
T8-gp140
Time (s)
F)
T649Q26L
CD4-gp140
T8-gp140
Time (s)

Figure 14









E)

	k_{on} M^{-1} s^{-1}	k_{off} s^{-1}	K_d µM	$t_{1/2}$ s
DP178				
CD4-gp120	0.75×10^{3}	1.5×10^{-3}	2.0	462
CD4-gp140	0.93×10^{3}	1.0×10^{-3}	1.1	693
T649Q26L				
CD4-gp120	1.26×10^{3}	3.2×10^{-3}	2.54	217
CD4-gp140	0.88×10^{3}	1.1×10^{-3}	1.20	630

Figure 15

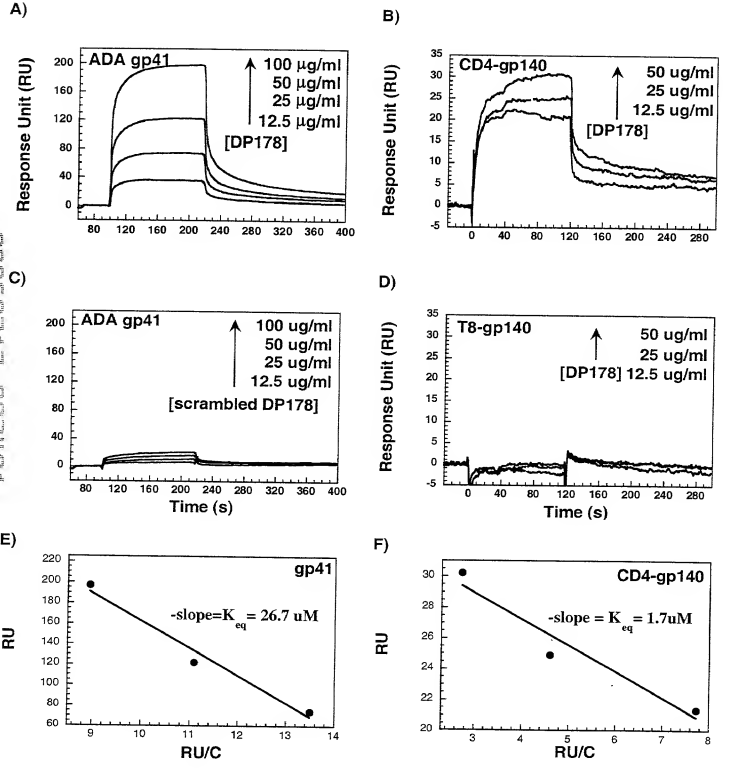

A)
ADA gp41
100 µg/ml
50 µg/ml
25 µg/ml
12.5 µg/ml
[DP178]
Response Unit (RU)
B)
CD4-gp140
50 ug/ml
25 ug/ml
12.5 ug/ml
[DP178]
Response Unit (RU)
C)
ADA gp41
100 ug/ml
50 ug/ml
25 ug/ml
12.5 ug/ml
[scrambled DP178]
Time (s)
D)
T8-gp140
50 ug/ml
25 ug/ml
[DP178] 12.5 ug/ml
Response Unit (RU)
Time (s)
E)
gp41
-slope=K_eq = 26.7 uM
RU
RU/C
F)
CD4-gp140
-slope = K_eq = 1.7uM
RU
RU/C

Figure 16

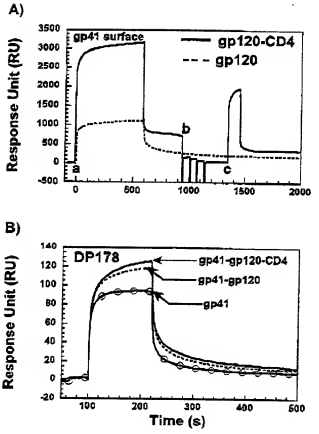

A)
gp41 surface
gp120-CD4
gp120
Response Unit (RU)
3500
3000
2500
2000
1500
1000
500
0
-500
a
b
c
0
500
1000
1500
2000
B)
DP178
gp41-gp120-CD4
gp41-gp120
gp41
Response Unit (RU)
140
120
100
80
60
40
20
0
-20
100
200
300
400
500
Time (s)

Figure 17

09960737.092902

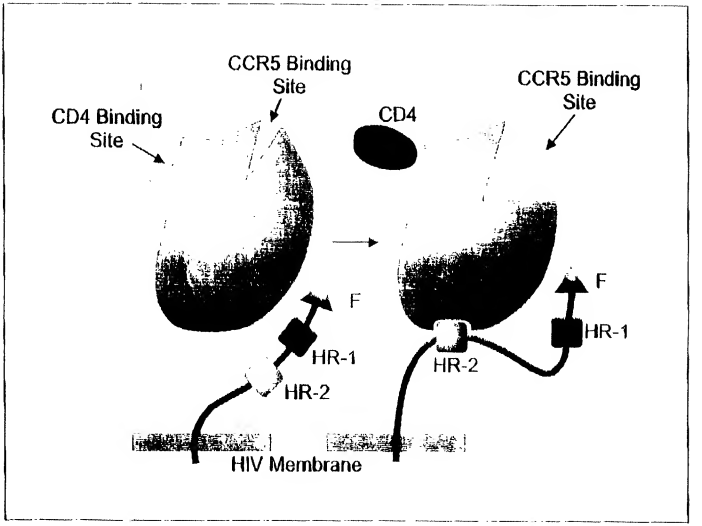


Figure 18

T0h260'27209660

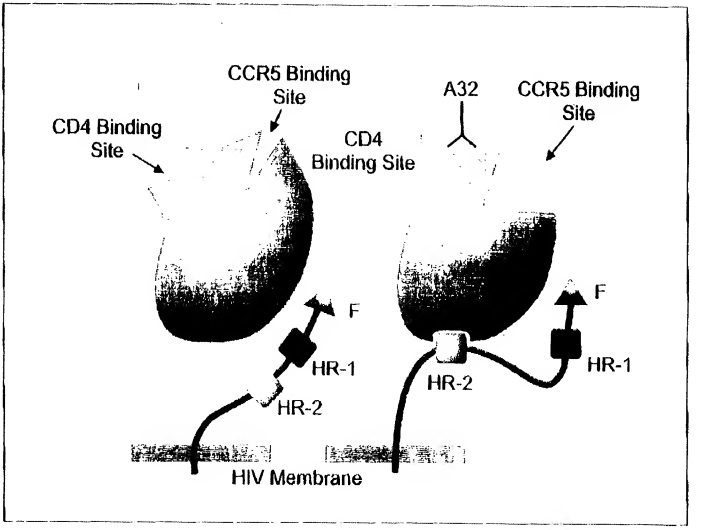


Figure 19

T01260*27209660

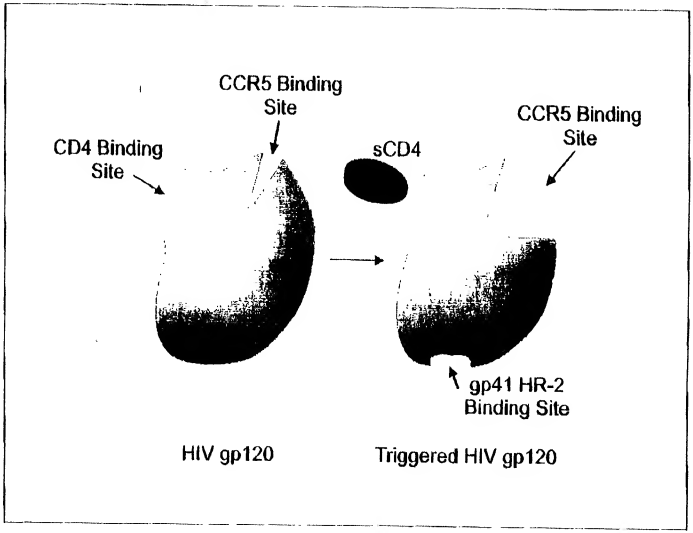


Figure 20

09960717.092401

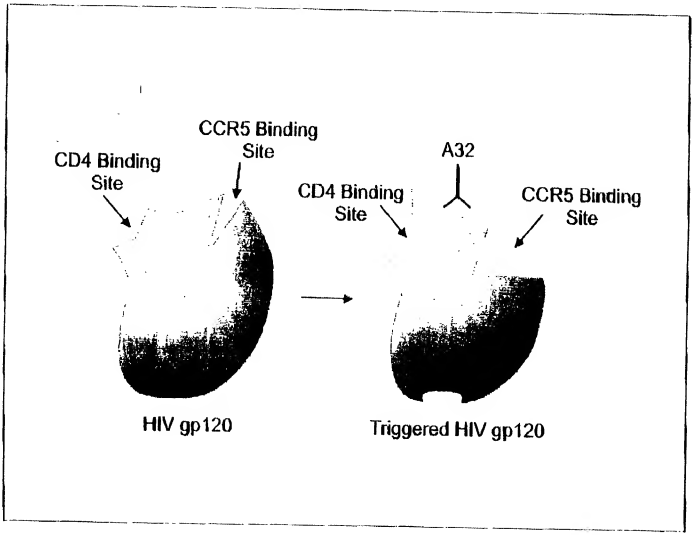


Figure 21

T04260"2720960

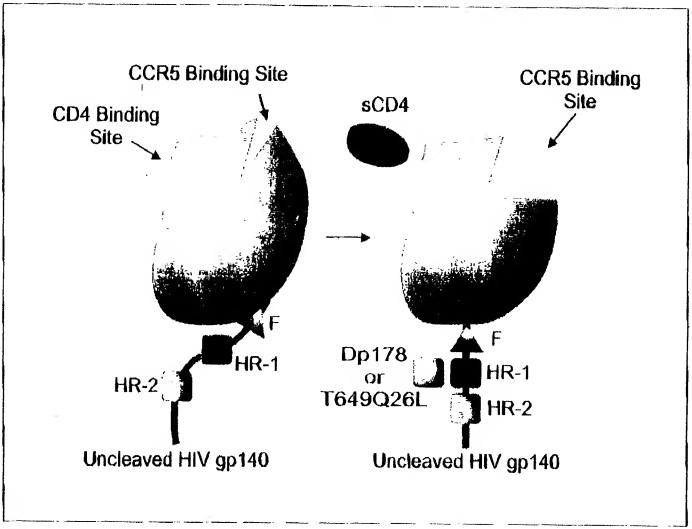


Figure 22

TD4260 .27Z09660

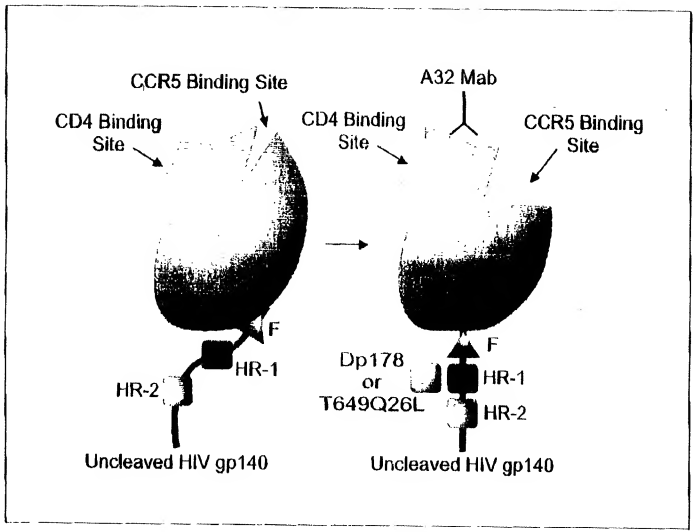


Figure 23

T0H260*ZTZ09660

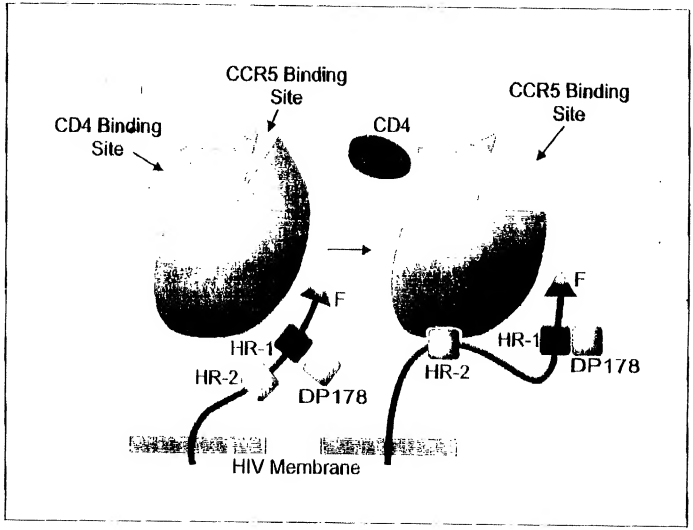


Figure 24

T0260'2T209560

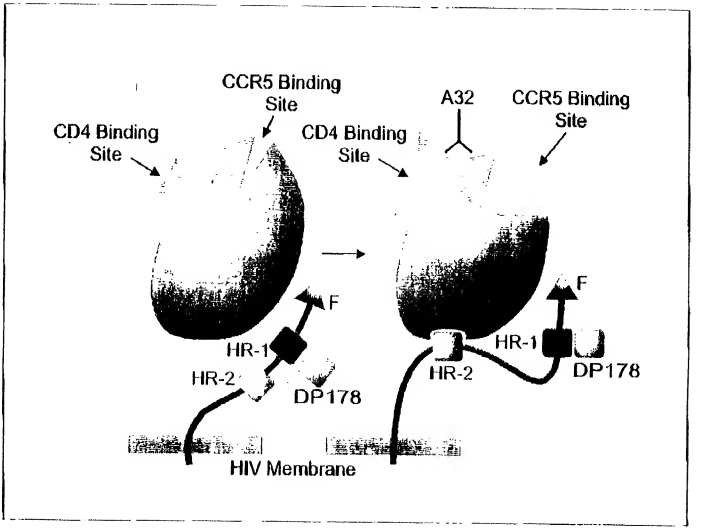


Figure 25

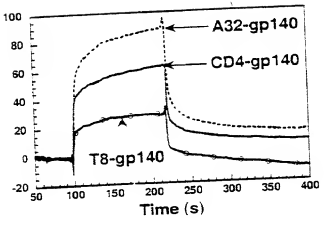

A32-gp140
CD4-gp140
T8-gp140
100
80
60
40
20
0
-20
50
100
150
200
250
300
350
400
Time (s)

Figure 26